USSN 10/022,040
Office Action of 07/26/2006
Response Dated: 10/26/2006

REMARKS

Claims 1-18 are pending in the present application. Claims 1-18 stand rejected under 35 U.S.C. 103(a) as being unpatentable over King et al, U.S. Pat. No. 6,959,399 in view of Born, U.S. Pat. No. 6,115,771. Reconsideration of the rejections and allowance of all pending claims is solicited in view of the following remarks.

As described in Background section of the present application, applicant is aware that synchronously polled enclosure services are known. However, as further described in the Background section, applicant also recognizes that synchronously polled enclosure services, such as SCSI Accessed Fault Tolerant Enclosure (SAF-TE) enclosure services, may cause problems, especially for Advanced Technology Attachment (ATA) devices resident in the enclosure. Accordingly, the present invention is directed to asynchronous enclosure services capable of alleviating the limitations of using synchronously polled enclosure services, such as when attempting to use ATA devices with synchronously polled enclosure services. In particular, independent claims 1, 7, and 13, respectively, include the structural and/or operational relationships of "transceivers for asynchronously interconnecting [an] enclosure processor...and [a] host bus adapter" and "configuring the processor to asynchronously notify the host bus adaptor of the status of any given device of the enclosure." Neither King nor Bond, alone or in combination, teaches or suggests these functional and/or operation relationships.

In contrast to the present invention, King describes the use of SAF-TE enclosure services compatible with the SAF-TE Interface Specification revision 1.00. See, for example, King, column 4, lines 31-56. The SAF-TE Interface Specification, the pertinent portion of which is provided herein as Exhibit A, specifically requires that asynchronous event notification is *not* used. See, for example, Exhibit A, Introduction. Consequently, by describing SAF-TE compatible enclosure services, King teaches directly away from the

-2-

USSN 10/022,040
Office Action of 07/26/2006
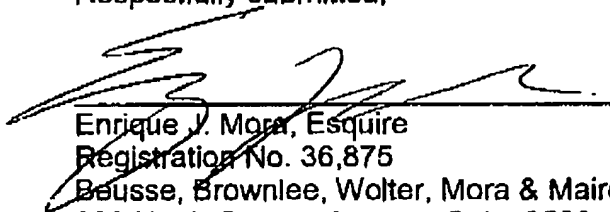Response Dated: 10/26/2006

asynchronous enclosure service structural and/or operational relationships
recited in claims 1, 7, and 13.

Bond fails to remedy the shortcomings of King as applied to claims 1, 7
and 13. Consequently, neither King nor Born, alone or in combination, support
the rejection under 35 U.S.C. 103. Therefore, claims 1, 7, and 13, and claims 2-
6, 8-12, and 14-16 depending, respectively, therefrom, are believed to be in
condition for allowance.

The applicant appreciates the Examiner's efforts and cordially invites the
Examiner to call the undersigned attorney if there are any outstanding items that
may be resolved via telephone conference.

Dated this 26th day of October, 2006

Respectfully submitted,

Enrique J. Mora, Esquire
Registration No. 36,875
Beusse, Brownlee, Wolter, Mora & Maire, P.A.
390 North Orange Avenue, Suite 2500
Orlando, Florida 32801
Telephone: (407) 926-7705
Facsimile: (407) 926-7720

-3-

USSN 10/022,040
Office Action of 07/26/2006
Response Dated: 10/26/2006

EXHIBIT A

-4-

SCSI Accessed
Fault-Tolerant Enclosures

Interface Specification

Revision Intermediate Review R041497
April 14, 1997

Intermediate
SAFTE Committee
Review Revision

Table Of Contents

1.0 Introduction

The objective of the SAF-TE Interface is to provide a standard, non-proprietary way for third party disk and RAID controllers to be automatically integrated with peripheral packaging that supports status signals (LEDs, audible alarm, LCD, etc.), hot swapping of hard drives, and monitoring of enclosure components. From the system vendor's point of view, this allows quick integration of the "best" third party controllers, knowing that they will fully integrate with disk and peripheral packaging. It also allows a selected controller to work with a variety of expansion packaging, being fully able to sense status and drive enclosure indicators. The cost of a separate cable and interface for enclosure services is also eliminated.

SCSI is the underlying transport mechanism chosen for communicating enclosure information. This means that all standard SCSI host adapters will work. No special considerations, such as reserved signals on the SCSI bus, or additional cables are required. The SAF-TE interface can be implemented as an inexpensive SCSI target, using a simple SCSI part and an 8 bit microcontroller. In this document, the target devices that implement the SAF-TE interface are collectively referred to as the SAF-TE Processor (SEP) device.

All communication is initiated by the host. The SAF-TE Processor device acts only in a target role. (Asynchronous Event Notification is not used.) The SAF-TE Processor device should periodically be polled by the host to detect changes in status.

Drive failure indications are controlled by the host's driver software through this command set, because it is the host that knows if a drive has failed. Status indicators for other components, such as fans and power supplies, may be controlled automatically by the SEP device.

2.0 SCSI Specification

The SAF-TE protocol is implemented using the SCSI microprocessor device type. The SAF-TE Processor (SEP) device conforms to the ANSI SCSI-2 specification for processor devices. It must support the following six SCSI commands -WRITE BUFFER, READ BUFFER, INQUIRY, TEST UNIT READY, SEND DIAGNOSTIC, and REQUEST SENSE. Any unsupported CDB opcode will result in a check condition, with a sense key of 05h, Illegal Request. (ASC 20h, ASCQ 00h - Invalid CDB Operation Code).

The maximum recovery time (time until 00h status is returned from TEST UNIT READY) of the SEP device from a SCSI bus reset is 15 seconds. While the SEP device must be polled, this is not expected to be a performance impact due to the short duration and low frequency of polling required. If the host polls for enclosure status every ten seconds or so, then the overall system performance will be minimally impacted. This specification does not place any restrictions on polling frequency. It is expected that most implementations will poll the SEP once every 2 to 10 seconds.

–Page 7–